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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,170	02/03/2006	Akimitsu Tsuda	1176/313	9622
46852	7590	12/11/2007	EXAMINER	
LIU & LIU 444 S. FLOWER STREET, SUITE 1750 LOS ANGELES, CA 90071			CARIASO, ALAN B	
			ART UNIT	PAPER NUMBER
			2885	
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			12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,170

Applicant(s) *TH*

TSUDA, AKIMITSU

Examiner

Alan Cariaso

Art Unit

2885

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20070711, 20060203</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 371, which papers have been placed of record in the file.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show Figs.7(a) and 7(b) as described in the specification (pg.3). Currently, only one fig.7 is shown. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "21". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

6. Claims 1, 2-4, 6 and 7 are objected to because of the following informalities:

7. Claim 1, line 4, the term "luminancelluminance-viewing" appears misspelled and/or missing a demarcating symbol between redundant terms. Furthermore, claim 1 appears to have two separate sentences as marked by a period (.) on line 7.

8. Claim 2, line 2 recites "first base angle a" and "second base angle ~", which appears modified, though not formally amended, from original "first base angle α " and "second base angle β ".

9. Similarly, claims 3 and 4, "a" refers to the "first base angle" and "~" refers to the second base angle, in contrast from original symbols " α " and " β ", respectively. It should be clarified which symbols are desired to represent the base angles.

10. Claim 3, the subjects "a first base angle a" and "a second base angle ~" are both incorrectly addressed with initial "a". Since they appear to refer to the same subjects mentioned in preceding claim 2, therefore these subjects should be addressed instead with --said--.

11. Claim 6 is objected for depending onto itself ("as claimed in claim 6").

12. Claim 7 is objected for depending onto itself ("as claimed in claim 7").

13. Appropriate correction is required of the above objected claims.

14. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1-9 been accepted as renumbered 1-8 filed February 3, 2006. However, applicant should make a correction to include formal cancellation of original claim 9 and/or make further corrections to the related informality and indefiniteness noted above (claim objection to claim 1) and below (USC 112 2nd paragraph rejection of claim 1). The content (original and currently amended) of preliminary amended claims 1-8 filed February 3, 2006 does not correspond to the content of the originally filed claims 1-9.

Claim Rejections - 35 USC § 112

16. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

18. Claims 1-8, the term "improvement" as part of "luminance/luminance-viewing angle improvement means" or "luminance/luminance-viewing angle improvement means", is indefinite as lacking basis from which this improvement is based.

19. Claim 1, lines 7-8, recites a second sentence "A backlight device as claimed in claim 1" which is an improper dependent claim phrase within the independent claim. It is further indefinite whether the "asymmetric prism sheet having a plurality of projections" is included or not as part of claim 1.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. Claims 1, 2, 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by OHKAWA (US 6,086,211).

22. In regards to claims 1 and 2, OHKAWA discloses a backlight device (10, figs.1-2) comprising: light guide means (12), having a pair of main faces (12B,12C) facing each other and edge faces (at least incident face 12A, fig.1), for guiding the light from a light source (7) arranged at one edge face (12A); luminance/luminance-viewing angle improvement means (prism sheet 13), arranged on the side of one main face (emission surface 12C), emitting the light (L) in a substantially normal direction (fig.4) to said main face (12C, fig.2) and a direction of having a predetermined angle to the normal direction (fig.7 shows a narrow angular range in both X and Y axes of light emitting from prism sheet 13, col.8, lines 33-40); and reflective means (14) arranged on another main face (back surface 12B) of said light guide means (12); wherein said luminance/luminance-

viewing angle improvement means (13) is asymmetric prism sheet (col.6, lines 40-41) having a plurality of projections (13A, 13B, fig.4 depicted below with added info.); wherein said projections of said asymmetric prism sheet (13) have a first base angle α of 75° to 90° and a second base angle \sim of 45° to 60° . First base angle, shown below, and with the adjacent inclination angle β_2 (of slope 13A), both form the acute angles of the smaller-area dotted right triangle. Similarly, the second base angle, shown below, and with the adjacent inclination angle β_1 (of slope 13B), both form the acute angles of the larger-area dotted right triangle. OHKAWA discloses the inclination angles β_2 and β_1 defining slopes 13A and 13B, respectively, with respect to the normal erected on the general surface of the guide plate, as illustrated by the right angle dotted lines below.

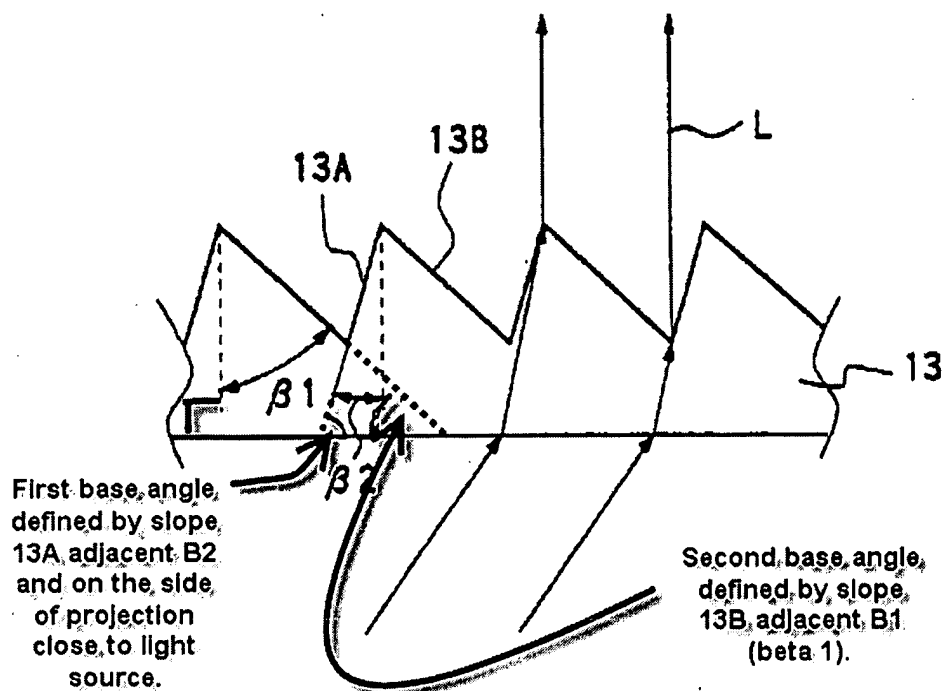


Fig. 4

OHKAWA discloses that inclination angle $\beta_2 = 5.6$ degrees (col.6, line 52; col.9, line 29), which by simple geometry/trigonometry means the same as the first base angle being 90 minus 5.6, or 84.4 degrees. With the other inclination angle $\beta_1 = 35$ degrees (col.6, line 52; col.9, line 29), it means that the second base angle is 90 minus 35, or 55 degrees.

23. In regards to claims 5 and 8, OHKAWA further discloses diffusion means (H, figs.1-2) arranged between said light guide means (12) and said luminance/luminance-viewing angle improvement means (13); and a liquid crystal display device (col.10, lines 25-28) comprising the backlight device (surface light source device) as claimed.

30. Claims 1 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by SHINOHARA et al (US 5,851,062).

31. SHINOHARA discloses discloses a backlight device (11, fig.17) comprising: light guide means (24), having a pair of main faces facing each other and edge faces (fig.17), for guiding the light from a light source (25) arranged at one edge face; luminance/luminance-viewing angle improvement means (prism sheet 112), arranged on the side of one main face (of light guide 24), emitting the light in a substantially normal direction (fig.6a) to said main face and a direction (beams 1,2,3 in figs.8ab) of having a predetermined angle to the normal direction (fig.8); and reflective means (4) arranged on another main face (fig.1) of said light guide means (1); wherein said luminance/luminance-viewing angle improvement means (112) is asymmetric prism sheet (112, fig.14b or 142, figs.15b,16b,16c) having a plurality of projections (23);

wherein diffusion means (fig.4) is arranged (col.4, lines 36-43) between said light guide means (11) and said luminance/luminance-viewing angle improvement means (112); wherein a symmetric prism sheet (112, figs.8,14), which has a plurality of projections, is arranged between said diffusion means (col.4, lines 36-43) and said luminance/luminance-viewing angle improvement means (112); wherein said asymmetric prism sheet (112) is arranged such that a ridge of said asymmetric prism sheet is substantially perpendicular (fig.17) to a ridge of said symmetric prism sheet (112); A liquid crystal display device (col.9, lines 16-33) comprising the backlight device.

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

33. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over OHKAWA (US 6,086,211).

34. OHKAWA discloses the claimed invention including said first base angle α (adjacent $\beta 2$) of projections positioned at the side of said light source (7). However, OHKAWA does not disclose the first base angle α of 85° and the second base angle \sim of 50° . OHKAWA does disclose ranges of the first base angle and second angle as 75° to 90° and 45° to 60° , respectively, shown above.

43. It would have been obvious to one having ordinary skill in the art at the time of the invention to include the backlight device of OHKAWA including the first and second base projection angles of 85° and 50° , both of which are within the base angle ranges disclosed by OHKAWA, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. One would have been motivated to use mid-range values in both range base angle sets as respective medians as an optimize comfortable value within the range to produce the desire optical result.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cariaso whose telephone number is (571) 272-2366. The examiner can normally be reached on 9-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alan Cariaso
Primary Examiner
Art Unit 2885

December 10, 2007
AC